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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/033,203

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Kenneth S. Walley

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06/28/2005

Mr. Christopher John Rourk
GODWIN GRUBER, LLP
1201 Elm Street, Renaissance Tower
DALLAS, TX 75270

EXAMINER

VUONG, QUOCHIE B

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,203

Applicant(s)

WALLEY, KENNETH S.

Examiner

Quochien B Vuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-38, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21, 22, 25-38 and 42 is/are rejected.
- 7) ☒ Claim(s) 23, 24 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to applicant's response filed on 02/11/2005. Claims 21-38, 41, and 42 are now pending in the present application. **This action is made final.**

Claim Objections

1. Claim 24 is objected to because of the following informalities: line 8, after the phrase "duty cycle system turning the mixer stage on and off", "and" should be changed to --at--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21, 22, 25, 27-32, and 34-38 are rejected under 35 U.S.C. 102(b) as being anticipated by DeLuca et al. (US 5448,756).

Regarding claim 21, DeLuca et al. disclose (figure 1) a system for receiving a signal comprising: a receiver operable to receive the signal; an interference avoidance system coupled to the receiver, the interference avoidance system turning the receiver off and on at a controllable frequency; and wherein the interference avoidance system

applies a first duty cycle if interference is present and a second duty cycle if interference is not present (column 3, lines 10-60; column 4, lines 36-64).

Regarding claims 22, 25, 27-29, Delucas et al. further disclose the receiver further comprises a plurality of stages; wherein the signal strength system comprises a signal power meter; wherein the interference avoidance system is operable to determine whether the magnitude of the signal output changes for a corresponding change in a duty cycle of the duty cycle system and to receive duty cycle data from the duty cycle system and to select a duty cycle for the duty cycle system based upon the signal output (column 3, lines 10-60; column 4, lines 36-64; column 5, lines 23-51; and figures 1-2).

Regarding claim 31, DeLuca et al. (figure 1) disclose a system for avoiding interference comprising: a signal input receiving a signal and determining whether interference is present; and a receiver cycling output outputting control data for turning a receiver on and off based on whether interference is present (column 3, lines 10-60; column 4, lines 36-64).

Regarding claims 32 and 34, DeLuca et al. disclose wherein the signal has been processed by a receiver; wherein the signal cycling output generates duty cycle control data (column 3, lines 10-60; column 4, lines 36-64).

Regarding claim 35, DeLuca et al. disclose (figure 1) a method for processing a signal comprising: receiving interference status data; cycling a receiver component according to a first duty cycle if the interference status data indicates that the signal includes a noise signal (column 3, lines 10-60; column 4, lines 36-64).

Regarding claims 36-38, DeLuca et al. disclose the component is a mixer or an automatic gain control system; wherein the first duty cycle is a preset duty cycle; the method further comprising adjusting the first duty cycle so as to reduce noise amplification; and wherein the interference status data is generated by a signal strength system (column 3, lines 10-60; column 4, lines 36-64; column 5, lines 23-51; and figures 1-2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca et al. in view of Ciccarelli et al. (US 6,498,926).

Regarding claim 26, DeLuca et al. disclose the the system of claim 21; in addition, DeLuca et al. disclose the duty cycle system coupled to line (55) for turning of the amplifiers (12 and 18) and the mixer (14) (see figure 1). Although DeLuca et al. do not disclose an automatic gain control stage controlling a gain of amplification of the signal, and a duty cycle system coupled to the automatic gain control stage and turning the automatic gain control stage on and off. However, an automatic gain control stage for controlling a gain of amplification of the signal is well known in the art as taught by

Ciccarelli et al. (column 15, lines 34-45). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the well known automatic gain control stage of Ciccarelli et al. to the system of DeLuca et al. for automatically controlling the gain of the amplifier(s) in addition to the power saving.

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca et al. in view of Knutson et al. (US 6,370,160).

Regarding claim 33, DeLuca et al. disclose the the system of claim 31. DeLuca et al. do not disclose the signal is a spread spectrum signal. However, spread spectrum signal is well known in communications system as taught by Knutson et al. (column 2, lines 34-42; column 3, lines 42-44; and figure 1). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the spread spectrum signal of Knutson et al. to the system of DeLuca et al. in order for the system to operate in spread spectrum environment for broader bandwidth and more secure communication.

7. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca et al. in view of Ooi et al. (US 4,498,195)

As to claim 42, DeLuca et al. disclose the system of claim 31. DeLuca et al. do not specifically disclose the interference is an interfering channel and not system noise. However, Ooi et al. disclose a system for detecting interfering channel (column 2, lines 27-47). Therefore, it would have been obvious for one having ordinary skill in the art at

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the time the invention was made to adapt the detecting interfering channel Ooi et al. to the system of DeLuca et al. in order to detect and suppress the interference for better signal quality.

Allowable Subject Matter

8. Claims 23, 24, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 23, DeLuca et al. disclose the system of claim 21; in addition, DeLuca et al. disclose the receiver further comprises a plurality of stages (column 3, lines 10-60; and figure 1). However, DeLuca et al. fail to teach a duty cycle system coupled to two or more of the plurality of stages, the duty cycle system turning each of the two or more of the plurality of stages off and on at a separately-controllable frequency.

Regarding claim 24, DeLuca et al. disclose the system of claim 21; in addition, DeLuca et al. disclose the receiver further comprises a mixer stage changing the frequency of the signal, a band pass stage (column 3, lines 10-60; and figure 1). However, DeLuca et al. fail to teach an automatic gain control stage coupled to the band pass stage, the automatic gain control stage controlling the gain of amplification of the signal; and a duty cycle system coupled to the mixer stage and the automatic gain control stage, the duty cycle system turning the mixer stage on and off at a first

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frequency, and turning the automatic gain control stage on and off at a second frequency.

Regarding claim 41, DeLuca et al. disclose the system of claim 31. However, DeLuca et al. fail to teach wherein the signal input receives the signal and determines whether interference is present by adjusting a duty cycle and determining whether a magnitude of an output signal increases or decreases in response to the adjustment of the duty cycle.

Response to Arguments

9. Applicant's arguments filed 02/11/2005 have been fully considered but they are not persuasive.

Regarding claims 21, 31, and 35, Applicant argues that on the reasons for allowance of the parent application, now U.S. Patent No. 6,360,085, the examiner stated that DeLuca et al. fail to disclose or render obvious the combination of duty cycle system, interference avoidance system and signal strength system as specified in the claims. Therefore, claims 21, 31, and 35 of the pending application should also be allowable. However, as the Applicant has already recognized the statement in the reasons for allowance of the U.S. Patent No. 6,360,085, i.e. "DeLuca et al. fail to disclose or render obvious the combination of duty cycle system, interference avoidance system and signal strength system **as specified in the claims**". And claims 21, 31, and 35 do not recite all the limitation as specified in the claims of the U.S. Patent No.

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6,360,085. Therefore, claims 21, 31, and 35 are not allowable with the same reasons set forth in the U.S. Patent No. 6,360,085.

In addition, the Applicant argues that DeLuca et al. do not disclose "interference" and "interference avoidance system". However, the examiner interprets "interference" as wanted signal is interfered or distorted with unwanted signal either internally or externally. And the claims 21, 31, and 35 do not specifically define what kind of interference, therefore, the noise and distortions generated by the receiver of DeLuca et al. read on the interference and further the interference avoidance system as recited in the claims.

Regarding claims 26 and 33, references (Ciccarelli et al. and Knutson et al.) are cited in support for the examiner's rejection of claims 26 and 33, respectively.

Terminal Disclaimer

10. The terminal disclaimer filed on 01/11/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,360,085 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rinderle (US 5,203,019) disclose radio receiver with improved automatic gain control.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QUOCHIE B. VUONG
PRIMARY EXAMINER

Quochien B. Vuong
June 22, 2005.